

ABSTRACT

1 This invention provides a measurement-while-drilling (MWD) downhole
2 assembly for use in drilling boreholes which utilizes directional formation evaluation
3 devices on a rotating assembly in conjunction with toolface orientation sensors. The data
4 from the toolface orientation sensors are analyzed by a processor and toolface angle
5 measurements are determined at defined intervals. Formation evaluation sensors operate
6 substantially independently of the toolface orientation sensors and measurements of the
7 formation evaluation sensors are analyzed in combination with the determined toolface
8 angle to obtain formation parameters.